

WHAT IS CLAIMED IS:

1. An image formation device that uses recording agents of multiple colors to form a color image on a medium
5 like paper, said image formation device comprising:

an image formation module that holds multiple recording agent cartridges respectively filled with the recording agents of the multiple colors in an attachable and detachable manner and moves said multiple recording
10 agent cartridges to form corresponding color component images and eventually form a color image with supplies of the recording agents from said multiple recording agent cartridges;

an information transmission module that is located
15 in a moving range of said multiple recording agent cartridges in the course of image formation by said image formation module and transmits information in a contactless, storable manner to each of storage elements respectively mounted on said multiple recording agent
20 cartridges; and

a control module that controls said information transmission module to store image formation-relating information, which regards formation of the color image

by said image formation module, into each of said storage elements mounted on said multiple recording agent cartridges.

5 2. An image formation device in accordance with claim 1, wherein said control module controls said information transmission module to store the image formation-relating information into each of said storage elements mounted on said multiple recording agent cartridges at a specific
10 timing after completion of formation of the color image by said image formation module. †

 3. An image formation device in accordance with claim 2, wherein said control module controls said information
15 transmission module to store previous image formation-relating information, which regards formation of a previous color image, in the course of formation of the corresponding color component images by said image formation module.

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 4. An image formation device in accordance with claim 1, wherein said control module controls said information transmission module to store the image formation-relating

information into a storage element mounted on one of said multiple recording agent cartridges filled with a recording agent of each of the multiple colors at an end timing of formation of the corresponding color component
5 image by said image formation module.

5. An image formation device in accordance with claim 1, wherein the image formation-relating information includes at least either of a number of formed images with
10 regard to each of the multiple colors and a consumption of the recording agent with regard to each of the multiple colors.

6. An image formation device in accordance with claim
15 1, wherein said multiple recording agent cartridges are filled with recording agents of four colors, that is, cyan, magenta, yellow, and black.

7. An image formation device in accordance with claim
20 1, wherein said image formation module separately holds said multiple recording agent cartridges on a rotatable, quasi-cylindrical rotary holder unit and rotates the rotary holder unit to form the respective color component

images.

8. An image formation device in accordance with claim 7, wherein each of said multiple recording agent
5 cartridges is designed to have a substantially fan-shaped cross section and form a substantially circular cross section as a whole in the case of attachment of said multiple recording agent cartridges to the rotary holder unit.

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9. An image formation device in accordance with claim 7, wherein said information transmission module is located in a neighborhood of an end of the rotary holder unit.

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10. An image formation device in accordance with claim 9, wherein said information transmission module is located to successively face said storage elements mounted on said multiple recording agent cartridges with rotation of the rotary holder unit.

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11. An image formation device in accordance with claim 1, wherein the recording agent is either toner or ink.

12. An image formation device in accordance with claim 1, wherein said storage element comprises: a memory unit that stores information; a receiver unit that
5 receives electromagnetic wave in a predetermined frequency band; an information analyzer unit that analyzes information carried on the electromagnetic wave in the predetermined frequency band received by said receiver unit; and an information control unit that, when the
10 analyzed information includes storage instruction information for storage of the image formation-relating information, controls said memory unit to store the image formation-relating information, which is sent on the electromagnetic wave in the predetermined frequency band
15 and is analyzed by said information analyzer unit, and said information transmission module transmits the information carried on the electromagnetic wave in the predetermined frequency band.

20 13. An image formation device in accordance with claim 12, wherein said storage element further comprises a power supply unit that utilizes energy of the electromagnetic wave in the predetermined frequency band

received by said receiver unit to generate electric power required for the analysis of information by said information analyzer unit and for the storage of information by said information control unit.

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14. An image formation device that uses a recording agent to form an image on a medium like paper, said image formation device comprising:

an image formation module that holds multiple
10 recording agent cartridges respectively filled with the recording agent in an attachable and detachable manner and moves said multiple recording agent cartridges to form an image on the medium with a supply of the recording agent from at least one recording agent cartridge among said
15 multiple recording agent cartridges;

an information transmission module that is located in a moving range of said multiple recording agent cartridges and transmits information in a contactless, storable manner to each of storage elements respectively
20 mounted on said multiple recording agent cartridges; and

a control module that controls said information transmission module to store image formation-relating information, which regards formation of the image by said

image formation module, into each of said storage elements mounted on said multiple recording agent cartridges.

15. An image formation device in accordance with
5 claim 14, said image formation device further comprising:

a cartridge specification module that specifies one recording agent cartridge among said multiple recording agent cartridges,

wherein said image formation module forms the image
10 with a supply of the recording agent from said one recording agent cartridge specified by said cartridge specification module.

16. An image formation device in accordance with
15 claim 14, wherein said control module controls said information transmission module to store the image formation-relating information into each of said storage elements mounted on said multiple recording agent cartridges at a specific timing after completion of
20 formation of the image by said image formation module.

17. An image formation device in accordance with claim 16, wherein said control module controls said

information transmission module to store previous image formation-relating information, which regards formation of a previous image, in the course of formation of the image by said image formation module.

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18. An image formation device in accordance with claim 14, wherein said control module controls said information transmission module to store the image formation-relating information into a storage element
10 mounted on a recording agent cartridge used for image formation at an end timing of the image formation by said image formation module.

19. An image formation device in accordance with
15 claim 14, wherein said control module controls said information transmission module to store the image formation-relating information into a storage element mounted on a specified recording agent cartridge, in response to a detachment instruction of said specified
20 recording agent cartridge.

20. An image formation device in accordance with claim 14, wherein the image formation-relating

information includes at least either of a number of formed images and a consumption of the recording agent.

21. An image formation device in accordance with
5 claim 14, wherein said image formation module separately holds said multiple recording agent cartridges on a rotatable, quasi-cylindrical rotary holder unit and rotates the rotary holder unit to form the image.

10 22. An image formation device in accordance with claim 21, wherein each of said multiple recording agent cartridges is designed to have a substantially fan-shaped cross section and form a substantially circular cross section as a whole in the case of attachment of said
15 multiple recording agent cartridges to the rotary holder unit.

23. An image formation device in accordance with claim 21, wherein said information transmission module is
20 located in a neighborhood of an end of the rotary holder unit.

24. An image formation device in accordance with

claim 23, wherein said information transmission module is located to successively face said storage elements mounted on said multiple recording agent cartridges with rotation of the rotary holder unit.

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25. An image formation device in accordance with claim 14, wherein the recording agent is either toner or ink.

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26. An image formation device in accordance with claim 14, wherein said storage element comprises: a memory unit that stores information; a receiver unit that receives electromagnetic wave in a predetermined frequency band; an information analyzer unit that analyzes information carried on the electromagnetic wave in the predetermined frequency band received by said receiver unit; and an information control unit that, when the analyzed information includes storage instruction information for storage of the image formation-relating information, controls said memory unit to store the image formation-relating information, which is sent on the electromagnetic wave in the predetermined frequency band and is analyzed by said information analyzer unit, and

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said information transmission module transmits the information carried on the electromagnetic wave in the predetermined frequency band.

5 27. An image formation device in accordance with claim 26, wherein said storage element further comprises a power supply unit that utilizes energy of the electromagnetic wave in the predetermined frequency band received by said receiver unit to generate electric power
10 required for the analysis of information by said information analyzer unit and for the storage of information by said information control unit.

28. A recording agent cartridge that is attached to
15 an image formation device functioning to form a color image and is filled with a recording agent of one of multiple colors used for formation of the color image, said recording agent cartridge comprising:

a storage element that utilizes energy of received
20 electromagnetic wave in a predetermined frequency band to store information sent on the electromagnetic wave.

29. A recording agent cartridge in accordance with

claim 28, said recording agent cartridge being designed to have a substantially fan-shaped cross section and form a substantially circular cross section as a whole in the case of attachment of multiple recording agent cartridges
5 respectively filled with recording agents of the multiple colors to said image formation device.

30. A recording agent cartridge in accordance with claim 28, wherein said storage element comprises: a memory
10 unit that stores information; a receiver unit that receives the electromagnetic wave in the predetermined frequency band; an information analyzer unit that analyzes information carried on the electromagnetic wave in the predetermined frequency band received by said receiver
15 unit; an information control unit that, when the analyzed information includes storage instruction information for storage of a specific piece of information, controls said memory unit to store the specific piece of information, which is sent on the electromagnetic wave in the
20 predetermined frequency band and is analyzed by said information analyzer unit; and a power supply unit that utilizes energy of the electromagnetic wave in the predetermined frequency band received by said receiver

unit to generate electric power required for the analysis of information by said information analyzer unit and for the storage of information by said information control unit.

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31. A recording agent cartridge in accordance with claim 28, said recording agent cartridge being filled with toner as the recording agent.

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32. A recording agent cartridge that is attached to an image formation device functioning to form an image and is filled with a recording agent used for formation of the image, said recording agent cartridge comprising:

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a storage element that utilizes energy of received electromagnetic wave in a predetermined frequency band to store information sent on the electromagnetic wave.

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33. A recording agent cartridge in accordance with claim 32, said recording agent cartridge being designed to have a substantially fan-shaped cross section and form a substantially circular cross section as a whole in the case of attachment of a preset number of the recording agent cartridges to said image formation device.

34. A recording agent cartridge in accordance with claim 32, wherein said storage element comprises: a memory unit that stores information; a receiver unit that
5 receives electromagnetic wave in a predetermined frequency band; an information analyzer unit that analyzes information carried on the electromagnetic wave in the predetermined frequency band received by said receiver unit; and an information control unit that, when the
10 analyzed information includes storage instruction information for storage of the image formation-relating information, controls said memory unit to store the image formation-relating information, which is sent on the electromagnetic wave in the predetermined frequency band
15 and is analyzed by said information analyzer unit, and a power supply unit that utilizes energy of the electromagnetic wave in the predetermined frequency band received by said receiver unit to generate electric power required for the analysis of information by said
20 information analyzer unit and for the storage of information by said information control unit.

35. A recording agent cartridge in accordance with

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claim 32, said recording agent cartridge being filled with toner as the recording agent.